Forty-Eighth Meeting

of the

American Electrochemical Society

Chattanooga, Tenn.

September 24, 25 and 26

1925

LOCAL COMMITTEE

Chairman
Paul J. Kruesi

C. W. Ashcraft
W. C. Campbell
George L. Davison
R. W. Drane
Robert Frazier
Milton Griscom
W. F. McFarland
W. E. Mitchell
Al Porzelius
Frank Robbins
Theodore Swann
H. B. Whiteman

GENERAL INFORMATION

Hotel Information

Headquarters and **Registration Bureau** will be at **Signal Mountain Hotel.** Hotel rates at this and other Chattanooga hotels are given on the last page of this program. The next hotel to Signal Mountain Hotel is 40 minutes distant.

Registration will begin at 8:00 P.M., Wednesday, September 23rd, at Signal Mountain Hotel. The Registrar will receive arriving members and guests, distribute badges and programs, and give other information.

Guests should be introduced by members, and when registered may attend the sessions and receive such other courtesies as may be extended to them by the Local Committee or the officers of the Society. Members of the Chattanooga Engineers' Club and local members of scientific and technical societies are invited to register as guests without formal introduction.

Places of Meeting

The technical sessions Thursday and Friday will be held in the ballroom of Signal Mountain Hotel. The lecture by Major Fiske on Thursday evening will be given at the Signal Mountain Golf and Country Club.

Round Table Discussion

The informal Round Table Discussion on "Electric Ferro-Alloys" will be held on Friday, September 25th, at 12:00 M. sharp, at Signal Mountain Hotel. Mr. Robert Turnbull, of the U. S. Ferro Alloys Corp., will be in charge of this discussion.

Social Features

Thursday evening, September 24th, at the Signal Mountain Golf and Country Club, Major Harold C. Fiske, Dist. Engineer, U. S. War Dept., will give an illustrated lecture on the "Power Resources of the Tennessee Valley." The lecture will be followed by an informal dance at the Club.

On Friday, at 7:00 P.M., a Barbecue will be held at the Signal Mountain Golf and Country Club. At 8:30 P.M. leave Club for Southern Railway Station. Board train no. 25 for Muscle Shoals.

Sightseeing trips can be arranged for either Thursday or Friday afternoon by application to the Registrar.

Trips to Industrial Plants

The following plants have extended an invitation to our members:

Lookout Oil & Refining Co. (Hydrogenation of cotton seed oil).

Chattanooga Coke & Gas Co., Inc. (By-product coke plant).

Standard-Coosa-Thatcher Co. (Mercerizing cotton yarns).

O. B. Andrews Co. (Straw board).

Tennessee Electric Power Co. (Plants at Ocoee River and Hales Bar).

Key-James Brick Co. (Tapestry brick).

Crystal Springs Bleachery Co. (Cotton bag material).

Chattanooga Bottle & Glass Mfg. Co. (Modern bottle manufacture).

Ross-Meehan Foundries (Malleable Iron & Electric Steel Castings)

Dixie Mercerizing Co. (Mercerizing cotton yarns).

Chattanooga Stamping & Enamelling Co.(Electric furnace enamelling).

Signal Mountain Portland Cement Co. (4,000 barrels per day).

Somerville Iron Works (Iron soil pipe and fittings).

Wilson & Co. (Oil hydrogenatio plant).

Davenport Hosiery Mills (Hummingbird hosiery).

W. S. Dickey Clay Mfg. Co. (Vitrified pipe).

Southern Ferro Alloys Co. (Ferro silicon in grades 10 to 50%).

Saturday, the entire day will be spent at Muscle Shoals, where members will have an opportunity to inspect the power house, Wilson Dam, and the nitrate plants. Special cars on Train No. 25, Southern Railway Co., leave Chattanooga Railroad Station at 9:30 P.M. Friday.

Members who do not wish to take in the trip to Muscle Shoals may arrange to visit, on Saturday, the two Ocoee plants of the Tennessee Power Co., or the mammoth new steam plant at Hales Bar. Either trip would occupy the entire day, Saturday.

In order that the Local Committee may plan the routing and make necessary arrangements, members are requested to send in a list of the plants they wish to visit, before the Meeting if possible. Final details regarding visits to industrial plants will be available at the Registrar's desk.

Entertainment for Ladies

Thursday, September 24, 1925

1:30 P.M. Golf tournament at Signal Mountain Golf and Country Club, or sightseeing trip.

7:00 P.M. Dinner at Signal Mountain Golf and Country Club.

8:00 P.M. Lecture by Major Harold C. Fiske.

9:30 P.M. Informal dance and social gathering at the Club.

Friday, September 25, 1925

2:00 P.M. Reception and Bridge Party at Signal Mountain Golf and Country Club.

7:00 P.M. Barbecue at the Club.

8:30 P.M. Leave Club for Southern Railway Station, Chattanooga.

9:30 P.M. Leave Chattanooga, Train No. 25, for Muscle Shoals.

Saturday, September 26, 1925

All day at Muscle Shoals.

Morning: Visits to Power House and Wilson Dam.

Noon: Old-Fashioned Southern Barbecue at Chestnut Hills.

Afternoon: Visits to Nitrate Plants.

Typewritten Discussion

Members wishing to present written discussion on any of the technical papers listed in this program are requested to submit typewritten copies in triplicate to the American Electrochemical Society, Columbia University, New York City, not later than September 21st.

TECHNICAL PROGRAM

Wednesday, September 23, 1925

8.00 P.M. Registration begins at Signal Mountain Hotel.

Thursday, September 24, 1925

9.30 A.M. Symposium on "The Relation of The Electrochemical Industry to the Production of Plant Fertilizers," Dr. H. C. Parmelee, Chairman.

(19) Charles O. Brown: The Nitrogen Problem.

(4) J. M. Braham: The Fixation of Atmospheric Nitrogen.

(3) S. Karrer: Some Phenomena in the Electric Arc Process of Nitrogen Fixation.

(9) H. K. Benson: The Manufacture of Sodium Nitrite by the Arc Process.

(20) William G. Allan: Hydrogen and By-Product Oxygen in Relation to Nitrogen Fixation and Fertilizers.

(13) K. D. Jacob: The Development of Volatilization Methods for the Manufacture of Phosphoric Acid.

1.30 P.M. Golf, Sightseeing trips, or trips to Industrial Plants.

NOTES

2.00 P.M. Symposium on "The Relation of the Electrochemical Industry to the Production of Plant Fertilizers," Continued, and papers on Electrodeposition.

(5) R. O. E. Davis: The Development of Fertilizer Practice.

(6) Wm. H. Ross: The Use and Preparation of Concentrated Fertilizers.

(17) H. J. M. Creighton and Warren H. Ogden: The Disintegration of Carbon Anodes in Aqueous Solutions of Nitric Acid.

(15) P. A. Nichol and O P. Watts: Effect of Nitrates on Current Efficiency of Plating Solutions.

(1) Geo. M. Enos: Notes on the Plating of Chromium on Steel.

(12) Wm. M. Walker, J. H. Sorrels and J. M. Breckenridge: Single Potentials of Copper in Solutions of Copper Cyanide in Sodium Cyanide and in Potassium Cyanide and of Zinc in Solutions of Zinc Cyanide in Sodium Cyanide.

(16) H. D. Hineline and W. B. Cooley: Electrodeposition of Copper Nickel Alloys.

NOTES

(8) C. T. Thomas and W. Blum: The Protective Value of Nickel Plating.

(14) Herbert H. Beeny: The Electro-Chemical Corrosion of Iron and Steel.

5.30–6.30 P.M. Meeting of the Board of Directors, Signal Mountain Hotel.

7.00 P.M. Dinner at Signal Mountain Golf and Country Club.

8.00 P.M. Illustrated lecture by Major Harold C. Fiske of the U. S. War Dept. on "Power Resources of the Tennessee Valley."

9.30 P.M. Dance and Social Entertainment at the Club.

Friday, September 25, 1925

9.30 A.M. Technical Session, Signal Mountain Hotel. Papers on Electrothermic Subjects.

(18) H K. McIntyre and Geo C. Cox: A Double Current Electrolytic Furnace.

(11) J. R. Cain and A. A. Peterson: A Laboratory High Frequency Vacuum Furnace.

(10) G. A Roush and M. Miyake: The Equilibrium of the Series Cyrolite-Alumina.

NOTES

(21) J. W. Marden: Cast Thoria.

(7) John Wierda and H. C. Kremers: Observations on the Rare Earths: The Concentration of Praseodymium Material and the Preparation and Properties of Metallic Praseodymium.

(2) Norman B. Pilling: Electrical Properties of Copper-Nickel-Manganese Alloys.

12.00 M. Round Table Discussion at luncheon, Signal Mountain Hotel. Subject: "Electric Ferro Alloys." Mr. Robert Turnbull, Chairman.

1.30 P.M. Trips to Industrial Plants, or Sightseeing Trips.

2.00 P.M. Reception and Bridge Party for ladies at Signal Mountain Golf and Country Club.

7.00 P.M. Barbecue at Signal Mountain Golf and Country Club.

8.30 P.M. Leave Club for Southern Railway Station.

9.30 P.M. Leave Chattanooga for Muscle Shoals. Train No. 25.

NOTES

Saturday, September 26, 1925

Muscle Shoals

Sleepers may be occupied until 7:00 A.M.

8.00 A.M. Breakfast, at Florence, Alabama.

8.30 A.M. Automobile trip to Wilson Dam and Power House.

12.00 M. Old-fashioned Southern Barbecue at Chestnut Hills, family estate of the late Gen. John Coffee.

2.00 P.M. Automobile trips to Nitrate Plants.

Return train schedules from Muscle Shoals will be posted at the Registrar's desk.

NOTES

HOTELS

SIGNAL MOUNTAIN HOTEL (Headquarters)*

Single Room and Bath $4.00
Double Room and Bath $6.00

HOTEL PATTEN	$2.00	per day and up
PARK HOTEL	1.75	" " " "
READ HOUSE	1.50	" " " "
AUSTIN HOTEL	1.50	" " " "
NORTHERN HOTEL	1.25	" " " "

* Only Hotel on Signal Mountain. Other hotels listed are in Chattanooga, a forty minutes' ride from Signal Mountain Hotel.

OFFICERS OF THE SOCIETY

PRESIDENT
F. M. Becket, New York City

PAST-PRESIDENT
H. C. Parmelee

VICE-PRESIDENTS

C. F. Burgess	Wm. Blum
Carl Hering	F. C. Frary
F. A. J. FitzGerald	R. F. Conn
Terms expire 1926	*Terms expire 1927*

MANAGERS

P. D. Merica	S. C. Lind	H. W. Gillett
C. B. Gibson	A. H. Hooker	F. N. Speller
R. A. Witherspoon	Duncan MacRae	J. Watson Bain
Terms expire 1926	*Terms expire 1927*	*Terms expire 1928*

TREASURER
Acheson Smith

SECRETARY
Colin G. Fink, Columbia University, New York City

LOCAL SECTIONS OF THE SOCIETY

Philadelphia Section

Carl Hering, Chairman, Philadelphia, Pa.
S. S. Sadtler, Secretary, Philadelphia, Pa.

New York Section

R. M. Burns, Chairman, New York City
Chas. H. Eldridge, Secretary, New York City.

Pittsburgh Section

C. G. Schluederberg, Chairman, Pittsburgh, Pa.
C. J. Rodman, Secretary-Treasurer, Pittsburgh, Pa.

Niagara Falls Section

Wm. G. Harvey, Chairman, Niagara Falls, N. Y.
L. C. Judson, Secy.-Treas., Niagara Falls, N. Y.

San Francisco Section

J. Woods Beckman, Chairman, Oakland, Calif.
Rudolf Gahl, Secretary, Berkeley, Calif.

Entrance Fee, $5.00. (Students are exempt from paying entrance fee.) Yearly Dues, $8.00. Application blanks and any other information may be obtained from the Secretary. Each member receives the Publications of the Society, in pamphlet form, containing the papers and discussions of the General Meetings of the Society. Members can obtain the bound volumes of the Transactions for an extra payment of $3.00 per year.